Artificial Intelligence and Reflections from Educational Landscape: A Review of AI Studies in Half a Century

Abstract

Artificial intelligence (AI) has penetrated every layer of our lives, and education is not immune to the effects of AI. In this regard, this study examines AI studies in education in half a century (1970–2020) through a systematic review approach and benefits from social network analysis and text-mining approaches. Accordingly, the research identifies three research clusters (1) artificial intelligence, (2) pedagogical, and (3) technological issues, and suggests five broad research themes which are (1) adaptive learning and personalization of education through AI-based practices, (2) deep learning and machine Learning algorithms for online learning processes, (3) Educational human-AI interaction, (4) educational use of AI-generated data, and (5) AI in higher education. The study also highlights that ethics in AI studies is an ignored research area.